USSR

UDC:620.179.16

GREBENNIK, V. S., FILIMONOV, S. A.

"The URT-10 Ultrasonic Resonant Thickness Meter"

Defektoskopiya, No. 3, 1970, pp. 43-49

Abstract: The operating principle, schematic diagram and primary technical characteristics of the URT-10 ultrasonic resonant thickness meter are presented. This is the first device to be equipped with a unit for automatic thickness reading and a unit indicating the reliability of the measurement results. The thickness is read from a calibrated galvanometer scale. The thickness meter allows products with plane parallel walls, tubing and outer sections of tube bends to be tested. The range of thicknesses measured is 2-14 mm (for steel); measurement error not over ±1-3% of the thickness being tested; tubing diameter 25 mm and more; internal bend radius at least equal to tube diameter; power supply 220 v, 50 Hz; power consumption not over 100 va; weight of device not over 12 Kg; size 200 by 260 by 400 mm.

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USSR

UDC 678.652'61'21-9

SHARKOVSKIY, V. A., AKUTIN, M. S., KERBER, M. L. SHCHEGLOV, L. L., MATVELASHVILI, G. A., PUKHOVITSKAYA, A. N., MILL', L. I., GREBENNIKOV, A. V., OSTROVSKAYA, A. YE., and DYMARSKAYA, YE. L.

"New Types of Aminoplastics"

Moscow, Plasticheskiye Massy, No 12, Dec 70, pp 53-54

Abstract: The article describes synthesis of fiberglass plastics based on carbamide binders. These binders include a carbamide oligomer modified by polyvinylacetate emulsion during synthesis, and ures-benzoguanamine-formaldehyde oligomer. Fiberglass textolites based on these oligomers and TS-8/3-250 glass treated with lubricant 752 are mechanically strong. In addition to its excellent strength properties, the plastic based on urea-benzoguanamine-formaldehyde oligomer is also water-resistant.

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1/4 015 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--SYNTHESIS OF SOME NITROGEN CONTAINING CARBORANE DERIVATIVES -U-

AUTHOR-(03)-ZAKHARKIN, L.I., GREBENNIKOV, A.V., LVOV, A.I.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (1), 106-12

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL SYNTHESIS, ORGANOBORON COMPOUND, CARBORANE COMPOUND, ACETONITRILE, AMINE, UREA

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1984/1593 STEP NO--UR/0062/70/000/001/0106/0112

CIRC ACCESSION NO--AP0100208

UNCLASSIFIED

2/4 015 UNCLASSIFIED

CIFC ACCESSION NO--AP0100208 PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HEATING CARBORANYLACETAMIDE WITH P SUB2 O SUB5 AT 230DEGREES 2 HR GAVE 90PERCENT CARBORANYLACETONITRILE, M. 109-10DEGREES; SIMILARLY WAS PREPD. METHYLCARBORANYLACETONITRILE, M. 146-7DEGREES. THIS WITH LIALH SUB4 IN ET SUB2 O GAVE 62PERCENT METHYLCARBORANYLETHYLAMINE; PICRATE, M. 223DEGREES; HCL SALT M. 325DEGREES. SIMILARLY WAS PREPD. 50PERCENT CARBORANYLETHYLAMINE-HCL, M. 296-7DEGREES. CICN AND HCB SUB10 H SUB10 CCH SUB2 MGBR IN ET SUB2 O IN 2 HR AT ROOM TEMP. GAVE 16PERCENT CARBORANYLACETONITRILE AND 84PERCENT CHLOROMETHYLCARBORANE. METHYLCARBORANYLACETYL CHLORIDE AND ME SUB2 NH GAVE THE DIMETHYLAMIDE, M. 97-8DEGREES, WHICH WITH LIALH SUB4 IN THF GAVE 62PERCENT N,N,DIMETHYL(METHYLCARBORANYLETHYL)AMINE; PICRATE M. 255-7DEGREES. SIMILARLY THE ACYL CHLORIDE AND NAN SUB3 GAVE THE CRUDE AZIDE WHICH HEATED IN MEPH 2 HR GAVE, AFTER FINAL 1 HR IN THE PRESENCE OF CONCD. HCL, 20PERCENT METHYLCARBORANYLAMINE-HCL, M. IS GREATER THAN 320DEGREES. REACTION OF ET CARBORANYLMETHYLACETOACETATE WITH HN SUB3 IN C SUB6 H SUB6 GAVE N AND ET ALPHA,CARBORANYLMETHYLACETAMIDOACETATE, M. 191-2DEGREES, WHICH HEATED WITH ACOH-HCL 5 HR GAVE HCB SUB10 H SUB10 CCH SUB2 CH(NH SUB2.HCL)CO SUB2 H, M. 296-7DEGREES; FREE ACID M. 210DEGREES.

UNCLASSIFIED

3/4 015 UNCLASSIFIED

CIRC ACCESSION NO--AP0100208 PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--METHYLCARBORANYLLITHIUM (FROM METHYLCARBORANE AND BULI IN C SUB6 H SUB6) WAS TREATED WITH EPICHLOROHYDRIN AT MINUS 65DEGREES TO YIELD 79PERCENT 1,METHYLCARBORANYL,3,CHLORO,2,PROPANOL, M. 57-8DEGREES, WHICH WAS OXIDIZED WITH K SUB2 CR SUB2 O SUB7-H SUB2 SO SUB4 TO MECB SUB10 H SUB10 CCH SUB2 CUCH SUB2 CL, B SUB1.5 162DEGREES, M. 30DEGREES, WHICH WITH K PHTHALIMIDE IN ME SUB2 NCHO IN THE COLD 1 HR GAVE N,METHYLCARBORANYLACETYLPHTHALIMIDE, M. 194-5DEGREES, WHICH HEATED 2 DAYS WITH HCL-ACOH GAVE 1,METHYLCARBORANYL,3,AMINO,2,PROPANONE; HCL SALT M. 185-6DEGREES. SIMILARLY WAS PREPD. CARBORANYLACETONE, M. 75-6DEGREES; 2,4,DINITROPHENYLHYDRAZONE, M. 185-6DEGREES. THE KETONE AND BR IN ACOH AT 50DEGREES GAVE 1,CARBORANYL,3,BROMO,2,PROPANONE, M. 30DEGREES, WHICH WITH THIOACETAMIDE GAVE 4,(CARBORANYLMETHYL)THIAZOLE; HBR SALT M. 220DEGREES; FREE BASE M. 92-3DEGREES. SIMILAR REACTION WITH ACNH SUB2 AT 140DEGREES 1.5 HR GAVE 4,(CARBORANYLMETHYL)OXAZOLE, M. 49-50DEGREES. ET GAMMA,(METHYLCARBORANYL)ACETOACETATE AND PHNHNH SUB2 IN ACOH 1 HR GAVE 1,PHENYL,3,(METHYLCARBORANYL)METHYL,5,PYRAZOLONE, M. 187DEGREES. VERATRYLETHYLAMINE AND ET SUB3 N TREATED IN ET SUB2 O WITH CARBORANYLACETYL CHLORIDE GAVE THE CORRESPONDING AMIDE, M. 105-6DEGREES, WHICH HEATED WITH POCL SUB3 IN MEPH 2 HR GAVE 1,(CARBORANYLMETHYL)3,4,DIHYDRO,6,7,DIMETHOXYISOQUINOLINE (I), M. 141-2DEGREES; PICRATE DECOMP. 230DEGREES; HCL SALT DECOMP. 225DEGREES; OXALATE DECOMP. 164DEGREES. METHYLCARBORANYLACETALDEHYDE AND VERATRYLETHYLAMINE IN ETOH-HCL 6 HR GAVE 1,(METHYLCARBORANYLMETHYL)1,2,3,4,TETRAHYDRO,6,7,DIME THOXYISOQUINOLINE-HCL, DECOMP. 252DEGREES.

UNCLASSIFIED

4/4 015 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0100208

ABSTRACT/EXTRACT--I HEATED IN ETOH 2 HR GAVE INNER SALT (II) OF THE DICARBAUNDECABORANE, DECOMP. 240DEGREES. THE NAHSO SUB3 ADDUCT OF(METHYL CARBORANYL)ACETALDEHYDE AND A KCN-(NH SUB4) SUB2 CO SUB3 SUSPENSION IN ET SUB2 O GAVE IN 6 HR WITH 50PERCENT AQ. ETOH AT 60DEGREES AND 1 HR AT 70-80DEGREES 30PERCENT 4,(METHYLCARBORANYLMETHYL)HYDANTOIN, M. 212DEGREES. DI-ET (CARBORANYLMETHYL)MALONATE HEATED WITH UREA IN ETONA-ETOH 15 HR GAVE 5,(CARBORANYLMETHYL)BARBITURIC ACID, M. 332-3DEGREES; MONO-NA SALT M. IS GREATER THAN 350DEGREES. THIS AND PCL SUB5-POCL SUB3 IN 4 HR AT 150DEGREES GAVE 5,(CARBORANYLMETHYL),2,4,6,TRICHLOROPYRIMIDINE, M. 146-7DEGREES.

UNCLASSIFIED

Acc. Nr: AP0047336 Ref. Code: UR0206

PRIMARY SOURCE: Vestnik Dermatologii i Venerologii, 1970, Nr 1, pp 14-19

AUTOIMMUNOLOGICAL REACTIONS IN PSORIASIS

I. I. Pototskiy, V. A. Grebennikov

Summary

In 100 patients with psoriasis autoantibodies to the normal human skin and to their own apparently normal skin were detected. For determination of antibodies to the normal human skin, precipitation test with double diffusion in agar according to the method of Oakley and Fulthrope, and leucocyte agglomeration test by the method of Fleck were used. The authors used 10% antigen from normal human skin Serum antibodies to the skin antigen were found by means of agar precipitation test in 46 (46±6%) patients. The greatest number of positive (26) and markedly positive (++++) presipitation tests (4) with the skin antigen was found in progressive and stationary stages. Positive intracutaneous tests with autoantiserum were obtained in 41 (59±5.9%) patients. Positive leucocyte agglomeration test was observed in 24 (30±5%) patients. Fixed on leucocytes autoantibodies for the skin developed more frequently in psoriatic arthritis and disseminated forms of psoriasis. Immunological studies in psoriasis revealed an important role of autoallergic processes in the pathogenesis of this disease.

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DI 2

Acc. Nr.: AT0046531

Ref. Code: UR0144

USSR

UDC 621.313.333

GREBENNIKOV, VASILIY IVANOVICH, Postgraduate of Novocherkassk Polytechnical Institute, DENISOV, ALEKSANDR ALEKSANDROVICH, Candidate of Technical Sciences, Docent of Novocherkassk Polytechnical Institute

"Parametric Regulation of the Speed of an Asynchronous Thyristor Electric Drive with Subordinate Control in the Rotor Circuit"

Novocherkassk, Izvestiya Vysshikh Uchebnykh Zavedeniy, Elektromekhanika (News of the Institutions of Higher Learning, Electromechanics), No 1, 1970, pp 61-65 (from Izvestiya Vysshikh Uchebnykh Zavedeniy, Elektromekhanika, No 1, 1970, p 114)

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Reel/Frame
19781789

AT0046531

Translation: This article contains a study of a block diagram of a nonreversing asynchronous electric drive with speed regulation by varying the stator voltage by means of thyristors. Contactless switching of resistances in the rotor circuit as a function of speed is recommended to increase the operating moments of the motor. Formulas are presented for efficient selection of the resistance stages. A control system is described for thyristor switching in the rotor circuit. The peculiarities of using feedback with respect to current during step switching of resistances in the rotor circuit are investigated. There are 3 illustrations and a 4-entry bibliography.

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19781790

USSR

UDC 620.179.16

BOGOD, V. B., and GREBENNIKOV, V. V., Scientific-Research and Design Institute of Installation Technology, Moscow

"Sensitivity of Ultrasonic Testing at High Temperatures"

Sverdlovsk, Defektoskopiya, No 4, Aug 73, pp 7-11

Abstract: The causes of changes in the sensitivity of ultrasonic testing at high temperatures are studied. The derived formula allows to estimate changes of the sensitivity of testing as a function of temperature. It is shown that the theoretical and experimental dependences on temperature are similar, and the decrease in sensitivity due to increasing temperature may reach 40% in the studied range. 5 ill.

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1/2 015 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--SOLID SOLUTIONS OF STRONTIUM AND BARIUM ORTHOSILICATES AND ORTHOGERMANATES -U-

AUTHOR-(02)-GREBENSHCHIKOV, R.G., SHITOVA, V.I.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(4), 773-5

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, CHEMISTRY

TOPIC TAGS--SOLID SOLUTION, SILICATE, GERMANIUM COMPOUND, X RAY DIFFRACTION, STRONTIUM COMPOUND, BARIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1496 STEP NO--UR/0363/70/006/004/0773/0775

CIRC ACCESSION NO--AP0125124

UNCLASSIFIED

2/2 015 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125124

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PHASE EQUIL. IN THE SYSTEMS SR SUB2 SIO SUB4 BA SUB2 SIO SUB4 AND SR SUB2 GEO SUB4-BA SUB2 GEO SUB4 WERE STUDIED, IN WHICH A CONTINUOUS SERIES OF SOLID SOLNS. ARE OBSD. PRESENTED ARE GRAPHICAL DEPENDENCES OF THE CHANGE IN THE LIGHT REFRACTION OF THE BA SUB2-X SR SUBX-(SI SUB1-Y GE SUB6)O SUB4 SOLID SOLNS. AND THEIR X RAY DIFFRACTION CHARACTERISTICS. FACILITY: INST. KHIM. SILIKAT. IM. GREBENSHCHIKOVA, LENINGRAD, USSR.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--NEW GERMANATE 5BAO.3CAO.4GEO SUB2 AND ITS RELATION TO SILICATE AND FLUOROBERYLLATE ANALOGS -U-
AUTHOR-(02)-GREBENSHCHIKOV, R.G., SHITOVA, V.I.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(1), 175-7

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SILICATE, SOLID SOLUTION, FLUORINE COMPOUND, BERYLLIUM COMPOUND, GERMANIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1996/0347 STEP NO--UR/0363/70/006/001/0175/0177

CIRC ACCESSION NO--AP0118023
UNCLASSIFIED

2/2 020 UNCLASSIFIED PROCESSING DATE--15OCT70
CIRC ACCESSION NO--AP0118023
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDY OF THE 5BAO.3CAO.4SIO SUB2-5BAO.3CAO.4GEO SUB2 SYSTEM PROVIDES ADDNL. INFORMATION AS TO THE CONDITIONS FOR THE FORMATION OF SOLID SOLNS. INVOLVING MULTICOMPONENT COMPDS. THE EXISTENCE IN THIS SYSTEM OF CONTINUOUS SERIES OF SOLID SOLNS. OF THE GLASERITE STRUCTURAL TYPE WAS ESTABLISHED FROM THE LINEAR CHANGE IN THE NS AS WELL AS FROM THE MONOTONIC NATURE OF THE CHANGE IN INTERPLANAR SPACINGS WITH COMPN. FACILITY: INST. KHIM. SILIKATOV IM. GREBENSHCHIKOVA, LENINGRAD, USSR.

UNCLASSIFIED

1/2 019 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--SOLID SOLUTIONS IN CAGEO SUB3 AND BAGEO SUB3 AND SRGEO SUB3 AND BAGEO SUB3 SYSTEMS -U-
AUTHOR-(03)-GREBENSHCHIKOV, R.G., SHIRVINSKAYA, A.K., PARFENENKOV, V.N.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(2), 323-6

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS, CHEMISTRY

TOPIC TAGS--SOLID SOLUTION, OPTIC PROPERTY, X RAY DIFFRACTION, ANALYSIS, CALCIUM COMPOUND, BARIUM COMPOUND, STRONTIUM COMPOUND, GERMANIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/0564 STEP NO--UR/0363/70/006/002/0323/0326

CIRC ACCESSION NO--AP0105549
UNCLASSIFIED

2/2 019 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0105549

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(2), 323-6 (RUSS). PHASE EQUIL. WERE STUDIED IN THESE BINARY SYSTEMS WHICH HAVE REGIONS OF SOLID SOLNS. BASED ON INTERMEDIATE INDIVIDUAL PHASES AND THE EXTREME MEMBERS OF THE SYSTEMS. THE OPTICAL AND X RAY DIFFRACTION CHARACTERISTICS FOR THE INDIVIDUAL PHASES AND FOR THE GERMANATE SOLID SOLNS. ARE PRESENTED.

UNCLASSIFIED

USSR

UDC: 533.9...16

BEREZHETSKIY, M. S., GREBENSHCHIKOV, S. Ye., KOSSYY, I. A., SBITNIKOVA, I. S., SHPIGEL', I. S.

"Electrostatic Probe Measurements on the L-1 Stellarator"

Tr. Fiz. in-ta AN SSSR (Works of the Physics Institute, Academy of Sciences of the USSR), 1973, 65, pp 82-99 (from RZh-Fizika, No 6, Jun 73, abstract No 6G356)

Translation: The paper describes methods of using electrostatic probes to measure the parameters of a plasma injected into the L-1 stellarator by a spark source. Isolated Langmuir probes, an emitting probe, a multigrid electrostatic probe, and double probes were used to measure the plasma potential, electron temperature, ion temperature, ion concentration, fluctuating ion flow to the wall of the chamber, and quasiconstant ion fluxes. The probe designs and electrical measurement setup are described, and the possibilities of the probe method under conditions typical for the L-1 stellarator are discussed. A brief review is given of the principal results of measurements. Bibliography of 22 titles.

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USSR UDC: 517.9:533.7

GREBENSHCHIKOV, Yu. B., SHIPILIN, A. V., Moscow

"A Maximum-Thrust Nozzle With a Given Area of the Lateral Surface"

Moscow, Zhurnal Vychislitel'noy Matematiki i Matematicheskoy Fiziki, Vol 12, No 1, Jan/Feb 72, pp 262-265

Abstract: The following problem is considered. Let ab be the unknown contour of a nozzle, let ac be the given characteristic of the oncoming flow, and let bc be the characteristic of the first family (Fig.). The area S of the lateral surface and the external pressure P_0 are given. The problem is formulated as follows: For given values of P_0 and the initial characteristic ac, find the function $\eta(x)$ which guarantees the extremum of the functional

$$\chi = \int_{x_a}^{x_b} \{P[x, \eta(x)] - P_0\}\, \eta\eta'\, dx ,$$

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USSR

GREBENSHCHIKOV, Yu. B., Shipilin, A. V., Zh. Vychisl. Mat. i Matem. Fiz., No 1, 1972, pp. 262-265

assuming the isometric condition on ab

$$S = \int_{x_a}^{x_b} \eta(1+\eta'^2)^{1/2}\,dx,$$

the differential relation on ab

$$\eta' u - v = 0,$$

and satisfaction of the equations

$$\frac{\partial u}{\partial y} - \frac{\partial v}{\partial x} = 0, \quad \frac{\partial(y\rho u)}{\partial x} + \frac{\partial(y\rho v)}{\partial y} = 0, \quad \frac{\partial P}{\partial u} = -\rho u, \quad \frac{\partial P}{\partial v} = -\rho v, \quad a^2 = \frac{dP}{d\rho}, \quad \sin^2\alpha = \frac{a^2}{u^2+v^2}$$

in region abc. Here x, y are cylindrical coordinates; u, v are projections of velocity on the x- and y-axes; ρ is density; P is pressure; a is the speed of sound; α is the Mach angle; and κ is the adiabatic exponent. An iteration process is proposed for solving the boundary value problem, and the results

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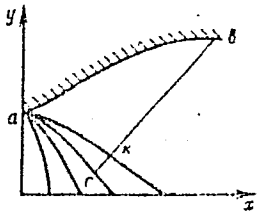
USSR

GREBENSHCHIKOV, Yu. B., SHIPILIN, A. V., Zh. Vychisl. Mat. i Matem. Fiz., No 1, 1972, pp 262-265

are compared with those found by using other methods. Three figures, two tables, bibliography of three titles.



3/3

1/2 010 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--POSSIBLE DETERMINATION OF THE SPIN NUMBER OF COMPLEXES IN SOLUTIONS BY A PARAMAGNETIC PROBE METHOD -U-
AUTHOR-(03)-LIKHTENSHTEYN, G.I., GREBENSHCHIKOV, YU.B., MEDZHIDOV, A.A.

COUNTRY OF INFO--USSR

6

SOURCE--ZH. FIZ. KHIM. 1970, 44(3), 812-14

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--METAL COMPLEX COMPOUND, EPR SPECTRUM, PARAMAGNETISM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1701 STEP NO--UR/0076/70/044/003/0812/0814

CIRC ACCESSION NO--AP0125322
UNCLASSIFIED

2/2 01C UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0125322

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE METHOD IS CONFORMED EXPTL. FOR A NO. OF 4TH PERIOD METAL COMPLEXES, SHOWING LINEAR RELATION BETWEEN BROADENING OF THE EPR SPECTRUM OF THE SPIN PROBE AND THE PRODUCT OF PARAMAGNETIC CONCN. AND NO. OF UNPAIRED ELECTRONS, GOVERNING ITS PARAMAGNETISM. FACILITY: INST. KHIM. FIZ., CHERNOGOLOVKA, USSR.

UNCLASSIFIED

USSR UDC 615.21+615.22]:547.785.5].012.1

PECHENINA, V. M., MUKHINA, N. A., ABATUROVA, K. A., GREBENSHCHIKOVA, L. P., MIKHAYLOVA, T. V., KURILENKO, V. M., and GILEV, A. P., Novokuznetsk Scientific Chemical-Pharmaceutical Research Institute

"Synthesis and Investigation of Some Benzimidazole Derivatives. V. Esters and Ethers of 1-Hydroxymethyl- and 1-(2-Hydroxyethyl)-benzimidazoles"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 5, No 10, Oct 71, pp 13-15

Abstract: To anaalkoxide obtained from 0.04 g-atom of metallic Na and corresponding alcohol, 0.02 mole of 1-chloromethylbenzimidazole hydrochloride is added with stirring, the mixture is left standing for several hours, the precipitate is removed by filtration, the filtrate is evaporated, and the oily residue is dissolved in ethanol. Upon addition of an alcoholic acid solution the respective salts of 1-hydroxymethylbenzimidazole ether is precipitated. To obtain esters of 1-(2-hydroxyethyl)benzimidazole, a previously described method was used. The compounds are moderately toxic, affecting slightly the central nervous system, lowering rectal temperature, and disturbed coordination in some animals. Specific physiological effects of select representatives are reported, but no general trend is noticeable.

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1/2 025 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--POLY, ETHYLENE OXIDE -U-

AUTHOR-(05)-CHERKANOV, S.P., TARNORUTSKIY, M.M., GREBENSHCHIKOVA, V.A., ALTERGOT, E.V., KOLOSOVA, N.B.
COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 264,691
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRATZY, TOVARNYE ZNAKI, 1970 47(9).
DATE PUBLISHED--03MAR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--POLYMER, ETHYLENE OXIDE, CHEMICAL PATENT, CATALYTIC POLYMERIZATION, ORGANOALUMINUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3007/0855 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0136289
UNCLASSIFIED

2/2 025 UNCLASSIFIED PROCESSING DATE--04DEC70
CIRC ACCESSION NO--AA0136289
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. POLY(ETHYLENE OXIDE) IS PREPD. BY POLYMN. OF ETHYLENE OXIDE IN A CATALYST SYSTEM CONSISTING OF AN ORGANOALUMINUM COMPOUND., A CHELATING AGENT, AND H SUB2O. TO INCREASE THE MOL. WT. OF THE POLYMER FORMED, DIETHYLENE DIOXIDE OR ITS DERIVS. ARE USED AS COCATALYSTS. FACILITY: NOVOSIBIRSKIY FILIAL NAUCHNO-ISSLEDOVATEL'SKOGO INSTITUTA POLIMERIZATSIONNYKH PLASTMASS.

UNCLASSIFIED

USSR UDC 541.183.5:546.799.4:546.431'226

GREBENSHCHIKOVA, V. I., DAVYKOV, Yu. P., and PERSHIN, A. S.

"The Question of the Adsorption of $Pu^{(IV)}$ on a $BaSO_4$ Precipitate"

Leningrad, Radiokhimiya, Vol XIII, No 3, 1971, pp 442-443

Abstract: As is well known, adsorption of mono- and bivalent cations on polar crystals is subject to the laws of secondary electrostatic adsorption, while adsorption on tri- and tetravalent metals shows a number of deviations from those laws. The present study was made to obtain experimental data on the adsorbtion of tetravalent plutonium in the region of its hydrolysis on a $BaSO_4$ suspension recrystallized to form a constant surface. Data obtained indicate clearly that the equilibrium distribution of $Pu^{(IV)}$ between the $BaSO_4$ precipitate and its saturated solution is established in 10-15 min. -- evidence of the adsorption capture of plutonium by the $BaSO_4$ surface. Also observed was a dependence of plutonium adsorption on SO_4^{2-} ion concentration and H^+ ion and Na^+ ion concentration, indicating that the plutonium is adsorbed twice -- that is, it enters the external "lining" of a double electrified layer. Adsorption evidently increases in the pH = 0.8-2.4 interval. Further, it is concluded that either hydrolyzed $Pu^{(IV)}$ ions are not adsorbed

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on a $BaSO_4$ precipitate, or else that the adsorbability of the hydrolyzed forms is less than that of $Pu^{(IV)}$ ions.

The tests showed that with pH = 1.4 (ca. 40% of $Pu(OH)^{3+}$ was present in the solution), there is increase in the surface charge of the $BaSO_4$ precipitate, while with pH = 1.0 and pH = 1.8 there is competitive action by Na^+ ions.

The general conclusion reached is that either hydrolyzed forms of $Pu^{(IV)}$ are not adsorbed on a $BaSO_4$, or else are adsorbed according to the laws of secondary electrostatic adsorption. Further experiments are now in progress, including some to determine the condition of $Pu^{(IV)}$ in solution.

USSR UDC 541.49:546.841'661.733.1

GREBENSHCHIKOVA, V. I., BRYZGALOVA, R. V., and ROGOZIN, Yu. M.

"Thorium Oxalate Complexes"

Moscow, Radiokhimiya, Vol 12, No 2, 1970, pp 279-285

Abstract: This study deals with the determination of the composition and instability constants of thorium complexes existing in mixed solutions of nitric and oxalic acids. The method of ligand displacement is used. The use of benzene-2-arsonic acid <1-azo-1> 2-hydroxynaphthalene-3,6-disulfonic acid (thoron) is recommended. The composition of oxalate complexes of thorium in mixed solutions of nitric and oxalic acids was determined. For ratios of total concentrations of oxalic acid and thorium from 1.3 to 13.0 and $[HNO_3]$ = = 0.12-0.5 M, thorium is found in solution mainly as the cationic complex of composition $[Th(C_2O_4)]^{2+}$. For a $[H_2C_2O_4]/C_{Th}$ ratio of 13.0-33.0 and the same nitric acid concentration, thorium exists mainly as the neutral complex $[Th(C_2O_4)_2]^0$. It was found that instability constants K of the first and second oxalate complex at μ = 0.5 are, respectively, $2.8 \cdot 10^{-7}$ and $4.7 \cdot 10^{-10}$.

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1/2 007 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--THORIUM OXALATE COMPLEXES -U-

AUTHOR-(03)-GREBENSHCHIKOVA, V.I., BRYZGALOVA, R.V., ROGOZIN, YU.M.

COUNTRY OF INFO--USSR

SOURCE--RADIO KHIMIYA 1970, 12(2), 279-86

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--THORIUM COMPOUND, OXALATE, COMPLEX COMPOUND, LIGAND, NAPHTHALENE, SULFONIC ACID, ORGANIC ARSENIC COMPOUND/(U)THORON ARSENIC LIGAND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3006/1490 STEP NO--UR/0186/70/012/002/0279/0286

CIRC ACCESSION NO--AP0135151

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002201010020-3"

2/2 007 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0135151

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE COMPNS. AND INSTABILITY CONSTS. OF OXALATE COMPLEXES OF TH WERE DETD. BY THE METHOD OF LIGAND SUBSTITUTION. 1,((2,ARSONOPHENYL)AZO),2,HYDROXY,3,6,NAPHTHALENEDISULFONIC ACID (THORON) IS RECOMMENDED AS THE SUBSTITUTE LIGAND. THE COMPNS. OF OXALATE COMPLEXES OF TH IN MIXTS. OF HNO SUB3 AND OXALIC ACID WERE DETD. IN SOLNS. WITH (H SUB2 C SUB2, O SUB4)-(TH PRIME4POSITIVE) CONCN. RATIOS OF 1.3-13.0 AND HNO SUB3 CONCN. 0.12-0.5MU, THE TH IS PRIMARILY IN THE FORM OF THE COMPLEX (TH(C SUB2 O SUB4)) PRIME2POSITIVE. WITH (H SUB2 C SUB2 O SUB4)-(TH PRIME4POSITIVE) RATIOS OF 13.0-33.0 AND THE SAME HNO SUB3 CONCN. THE NEUTRAL COMPLEX (TH(C SUB2 O SUB4) SUB2) IS FORMED. THE INSTABILITY CONSTS. OF THE 1ST AND 2ND COMPLEXES AT ION STRENGTH OF 0.5 ARE 2.8 TIMES 10 PRIME NEGATIVE9 AND 2.7 TIMES 10 PRIME NEGATIVE16, RESP.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002201010020-3"

USSR

UDC 621:385.032.269

GREBENYUK, A.F.

"Some Designs Of Electron Guns Which Form Disk Beams"

Radiotekhnika. Resp. mezhved. temat. nauch.-tekhn.sb. (Radio Engineering. Republic Interdepartmental Thematic Scientific-Technical Collection), 1971, Issue 17, pp 14-19 (from RZh--Elektronika i yeye primeneniye, No 3, March 1972)

Translation: The paper considers problems of forming disk electron beams (EB), converging and diverging with a change of the radial coordinate. Variants of electron guns are presented, capable of assuring formation of high-perveance disk EBs of rectangular form, and also an EB which converges with respect to thickness and which is passed through a ring-shaped slit located in the accelerating electrode. Practical recommendations are given with respect to the use of guns for various designs of microwave devices and the degree of spreading apart of the EB as a result of Coulomb repulsion is compared for guns of radial design (with interior location of the cathode) and for guns forming an ordinary ribbon EB. 6 ref. Summary.

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USSR

UDC 621.385.625.5

GREBENYUK, A.F., TERESHCHENKO, A.I.

"Some Problems Of An Electronic Radial Reflex Klystron"

Radiotekhnika. Resp. mezhved. nauchno-tekhn. sb. (Radio Engineering. Republic Interdepartmental Scientific-Technical Collection), 1970, Issue 14, pp 159-166 (from RZh--Elektronika i yeye primeneniye, No 4, April 1971, Abstract No 4A160)

Translation: Formulas are obtained for the electronic efficiency of the output power and the range of electronic tuning of a radial reflex klystron, with the effect of the space charge taken into account. On the basis of numerical computations made with the aid of a continuous action computer, a comparison is made of the parameters of radial and linear designs of a reflex klystron. 4 ref. Summary.

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USSR

UDC 539.3:534.1

GREBENYUK, G. I., CHAPLINSKIY, I. A.

"A Nonlinear Problem of Calculating a Thin Spherical Shell on an Elastic Base"

Tr. Sib. NII metrol. (Works of the Siberian Scientific Research Institute of Metrology), 1971, No. 13, pp 45-52 (from RZh-Mekhanika, No 8, Aug 72, Abstract No 8V236)

Translation: The problem of the stability of a symmetrically loaded spherical shell on an elastic base is solved in a geometrically nonlinear formulation. The case of loss of stability with the formation of a local symmetric depression is discussed. A two-parameter Vlasov model was selected as a model for the elastic base. The Ritz-Papkovich method for two variable parameters is applied to solve the system of nonlinear equations describing the problem. Shells of varying rigidity with different rigidities of the base are investigated. Graphs are given for equilibrium states of the base and the lower critical stress as a function of the parameter characterizing the rigidity of the shell. The effect of rigidity of the base on the lower critical load is analyzed. It is concluded that an

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USSR

GREBENYUK, G. I., CHAPLINSKIY , I. A., Tr. Sib. NII metrol., 1971, No. 13, pp 45-52

increase in the rigidity of the base lowers the lower critical load. The possibility of separation of the shell from the base in the region of the depression under a considerable increase in the rigidity of the base is noted. V. B. Silkin.

2/2

UDC: 681.327

USSR

GREBENYUK, O. T., LEVCHENKO, V. N., ROVNER, I. A.

"Device for Copying from Punch Tape to Punch Cards"

Obmen opytom v radioprom-sti (Exchange of Experience in the Radio Industry), Vyp. 4, Moscow, 1970, pp 47-48 (from RZh-Avtomatika, Telemekhanika i vychislitelnaya tekhnika, No 9, Sep 70, Abstract No 9B486)

Translation: This article contains a study of a device for copying from punch tape to punch cards which permits automatic and remote punching of punch cards in accordance with the information read from the punch tape. The device is designed for use in the Ural 11-B digital computer. There is one illustration.

1/1

Electrochemistry

USSR

GREBENYUK, V. D., and PROKHORENKO, N. I.

"Influence of the Concentration of Electrolyte Solutions on the Consumption of Electricity in Electrochemical Regeneration of the Mixed Ionites Layer in the Desalting Cell"

Moscow, Elektrokhimiya, Vol 9, No 1, Jan 73, p 141

Abstract: When the concentration of solutions in electrode cells is less than 0.5 N, the amount of the material transmitted by diffusion and the quantity of transferred co-ions is less than 10% of the total stream of ions passing through the membranes. This serves as the basis for the use of an equation describing the kinetics of electrochemical regeneration of the ionite in the desalting cell, to calculate such a concentration of electrode solutions at which the losses of electrical energy for this process would be minimal. The function obtained agrees well with experimental data.

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1/2 011 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--ELECTROCHEMICAL REGENERATION OF ION EXCHANGE COLUMNS DURING TRANSVERSE CIRCULATION OF AN EQUILIBRIUM SOLUTION -U-
AUTHOR--GREBENYUK, V.D., GNUSIN, N.P., BARMASHENKO, I.B., MAZANKO, A.F.

COUNTRY OF INFO--USSR

SOURCE--ELEKTROKHIMIYA 1970, 6(1) 139-42

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ION EXCHANGE RESIN, ELECTROCHEMISTRY, ION, CHEMICAL EQUILIBRIUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1987/0319 STEP NO--UR/0364/70/006/001/0139/0142

CIRC ACCESSION NO--AP0103974

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2/2 011 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0103974

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REGENERATION OF ION EXCHANGERS IS EXPRESSED BY AN EQUATION THAT RELATES THE AMT. OF IONS REPLACED WITHIN A CERTAIN TIME TO THE MOBILITY OF THE ION, THE ION CONTENT IN THE ION EXCHANGER, AND THE CURRENT. THE EXPTL. RESULTS AGREE WELL WITH THE EQUATION.

0123

UNCLASSIFIED

Acc. Nr. AP0053747 Abstracting Service: CHEMICAL ABST. 6/70 Ref. Code UR0076

115686g Calculating the electrical conductivity of ion-exchange columns with a mixed layer of ion exchangers. Grebenyuk, V. D.; Gnusin, N. P.; Makarova, V. A. (Inst. Obshch. Neorg. Khim., Kiev, USSR). *Zh. Fiz. Khim.* 1970, 44(1), 132–6 (Russ). Two methods for calcg. the elec. cond. of ion-exchange columns with a mixed layer of ion exchangers are suggested and exptl. verified. The 1st method is based on the neutralization of the elec. cond. of the ion-exchange columns with individual ion exchangers, while the 2nd is based on the neutralization of the elec. cond. of the individual ion exchangers sepd. from the equil. soln. The applicability and the region of mutual consistency of these methods are discussed. M. Braunovic

REEL/FRAME
19830808

1/2 025 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--DISTANT ISCHEMIC LESIONS OF THE SPINAL CORD IN CLOSED INJURIES OF THE THORACIC AND LUMBAR REGIONS OF THE SPINE -U-

AUTHOR-(02)-GREBENYUK, V.I., SKOROMETS, A.A.

COUNTRY OF INFO--USSR

SOURCE--VRACHEBNOYE DELO, 1970, NR 4, PP 142-144

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--SPINAL CORD, INJURY, BLOOD CIRCULATION, SYNDROME

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1700 STEP NO--UR/0475/70/000/004/0142/0144

CIRC ACCESSION NO--AP0129070

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2/2 025 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0129070

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ANALYSING 44 PATIENTS WITH CLOSED INJURIES OF THE THORACIC AND LUMBAR REGION OF THE SPINE THE AUTHOR SINGLED OUT SEVERAL CLINICAL SYNDROMES OF ISCHEMIC SPINAL CORD INVOLVEMENT: INVOLVEMENT OF THE LOWER HALF OF THE SPINAL CORD, INVOLVEMENT OF THE THORACIC SEGMENTS, INVOLVEMENT OF INTUMESCENTIA LUMBALIS, INVOLVEMENT OF THE EPICONUS AND CONUS, INVOLVEMENT OF THE CAUDA EQUINA. A MAJOR ROLE IN THE PATHOGENESIS OF DISTANT AFFECTIONS OF THE SPINAL IS PLAYED BY BOTH ARTERIAL AND VENOUS ISCHEMIA.

FACILITY: PERVOGO LENINGRADSKOGO MEDITSINSKOGO INSTITUTA IM. AKAD. I. P. PAVLOVA.

UNCLASSIFIED

Marine and Shipbuilding

USSR UDC 629.122/.123:539.4

GREBENYUK, YA. P., RASKIN, YU. N., SEM'YANOV, I. V.

"Concerning the Standard of General Strength of River-Sea Ships"

Leningrad, Sudostroyeniye, No 11, Nov 70, pp 9-11

Abstract: River-sea ships are of shallower draft than ships operating exclusively in the maritime service, and differ from them with respect to other design features as well. Experience in the designing, construction, and operation of river-sea ships cannot as yet fully serve as basis for a set of rules for building them. Therefore when developing a standard of general strength for river-sea ships we must adopt the strength standard of maritime ships as a basis, and introduce into it necessary corrections which take into account the basic features of river-sea ships. The article presents a standard of general strength for river-sea ships that has been correlated with the experience of operating these ships and the results of full-scale strength tests of them. 4 tables, 3 bibliographic entries.

1/1

Acc. Nr: AP0036750 Abstracting Service: CHEMICAL ABST. 4-70 Ref. Code: UR 0068

6

78550k Preparation of mesitylene and durene by the isomerization and disproportionation of pseudocumene. Kolyandr, L. Ya.; Privalov, V. E.; Fomenko, G. M.; Nikitina, [illegible]; Lokshina, I. S.; Kocheregin, V. A.; Khvatkov, N. M.; Krishtopa, A. P.; Bilym, L. M.; Grebinnik, Z. G. (Kadiev. Koksokhim. Zavod, Kadievka, USSR). *Koks Khim.* 1970, (1), 33–40 (Russ). 1,2,4-$Me_3C_6H_3$ (I) of 90–5% purity was prepd. by rectifying coke chem. solvents (20–35 and 10–20% $Me_3C_6H_4$, 4–6 and 3–5% *m* + *p*-EtC_6H_4Me, 15–17 and 10–12% 1,3,5-$Me_3C_6H_3$ (II), 1–1.2 and 0.7–0.9% *o*-EtC_6H_4Me, 16–18 and 12–14% I, 1–2 and 2–3% 1,2,3-$Me_3C_6H_3$, 2–6 and 1–3% satd. hydrocarbons, and 0 and 2–3% unsatd. compds.) on columns having 50 theoretical plates at a reflux no. of 60–100. Isomerization and disproportionation in the presence of 30% of an $AlCl_3$-I complex at 127° for 3 hr in exptl. app. yielded 4.00% C_6H_5-PhMe-satd. compds., 17.27% $Me_2C_6H_4$, 17.02% II, 35.09% I, and 10.71% durene (III). Yields in plant runs were similar. Rectification of the II fraction on a lab. column having 75 theoretical plates at a reflux no. of 80–100 yielded II of 97.5% purity in 30.24% yield. After rectification to increase III concn. to 45.94% in the III fraction, recrystn. at 5 to −18° yielded III of ~82% purity and further recrystn. with 35% PhMe gave III of ~97% purity in ~85% yield (17% selectivity from I and 1.6% from the coke chem. solvent). Lucile S. Davison

1/1

REEL/FRAME
19721671

7

USSR

UDC: 531.715

SUMINOV, V. M., GOL'DBERG, M. M., GREBNEV, A. A., Moscow Institute of Aviation Technology

"A Device for Automatic Dimensional Analysis of Microscopic Objects"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 7, Mar 72, Author's Certificate No 329378, Division G, filed 15 Jun 70, published 9 Feb 72, p 152

Translation: This Author's Certificate introduces a device for automatic dimensional analysis of microscopic objects. The device contains an optical system, a closed-circuit television system, and a display unit. In front of the optical system is a light source, and the closed-circuit TV system has an analyzer at the output. As a distinguishing feature of the patent, the accuracy of analysis is improved by using an input controller made in the form of a set of time-mark elements connected between the output of the TV system and the input of the analyzer. The patent also covers a modification of this device distinguished by the fact that the light source is made in the form of a continuous-emission laser with an attachment for reducing the degree of coherence.

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GREBNEV, A.K.

transistors/radio engineering

JPRS 54764

22 December 1971

NONLINEAR AND MICROWAVE RADIO ENGINEERING SYSTEMS

Selected articles from the Russian-language book edited by L. D. Bakhrakh, corresponding member of the USSR Academy of Sciences and V. I. Samoylenko, candidate of engineering sciences: Nelineynyye i Sverkhvysokochastotnyye Radiotekhnicheskiye Sistemy, Trudy Moskovskogo [illegible] Instituta [illegible] Ordzhonikidze, Vol 2, No 215, 1970, signed to press 14 October 1970, Machine Building Press, Moscow.

CONTENTS

[I - USSR - F]

GREBNEV, A.K.

Figure 15. Model of a photo-sensitive unijunction transistor.
(1) B_1; (2) R_1; (3) B_2; (4) R_{B1}; (5) R_{B2}; (6) B_1.

Conclusion

The high switching speeds of unijunction transistors are very valuable for use in various computation circuits, and circuits in pulse and computing equipment.

The possibilities of integral construction and control by light expand the field of their application even wider.

Bibliography

1. Keeper, R. F., "The Unijunction Transistor," IEEE, 1956, Vol. 11, No. 7.
2. Sinclair, C. H., British Semiconductor Survey, "The Unijunction Transistor," 1963.
3. Enfant V. Jones, "Semiconductor Physics," Electronic Design, May 10, 1956, Vol. 13.
4. Enfant V. Jones, "Use the Unijunction Transistor That Does the Job Best," Electronic Design, 1956, Vol. 14, No. 12.
5. Peterson, G. "Planar Unijunctions and Their Impact on Circuit Applications," IEEE, 1956, Vol. 11, No. 7.
6. Crawford R., Dean R. F., "Two Unijunction Transistor in Relaxation Circuits," Electro-Technology, 1964, Vol. 73, No. 2, 3.
7. Sylvan F. F., "Silicon R. C., "Studying the Basics of Unijunction-Transistor Multivibrators," Electronic Design, 1954, Vol. 12, No. 7.
8. Ruslanov, V. I., Grebnov, A. K., and Kolvenosov, A. I., Patent Application "Model' avtokolebatelnogo diska" ("Model of a two-base diode") No. 20-695, Byulleten' izobreteniy (Bulletin of Inventions), 1967, No. 11.

UDC 6[illegible].7.051:621.39[illegible]

UNIJUNCTION TRANSISTORS AND THEIR POSSIBLE APPLICATIONS

Engineers A. [illegible],
A. I. [illegible], and
V. I. Ruslanov

Pages 17[illegible]

Unijunction [illegible] are one of the most [illegible] classes of semiconductor instruments. The [illegible] of these transistors are: the presence of a region of negative resistance characteristics, weak dependence of the switching voltage upon temperature, high resistance in a closed state and low resistance in an open state, high degree of reliability (the intensity of [illegible] failures amounts to less than 0.01 [illegible] per thousand hours of operation). Besides this, integral circuits may be assembled with unijunction transistors.

With the use of these instruments, we may design simple and reliable circuits, which has also [illegible] their application in such important devices as rocket control systems and the apparatus of artificial earth satellites.

Principles of Operation, Parameters, and Structures of Unijunction Transistors

A unijunction transistor is a three-electrode semiconductor instrument, which usually consists of a base region; a [illegible] of n-type silicon with ohmic contacts of two bases. The third electrode serves as an emitter; it forms a rectifying contact with the base region. The conventional designation of such a transistor is shown in Figure 1, a, and a simplified circuit diagram in Figure 1,b. The diode in Figure 1,b, [illegible] the presence of a p-n-junction between the emitter and the base region; R_{B1} and R_{B2} are the resistances between this junction and the contacts of the first (B_1) and the second (B_2) bases, respectively. [R_6 = [illegible]]

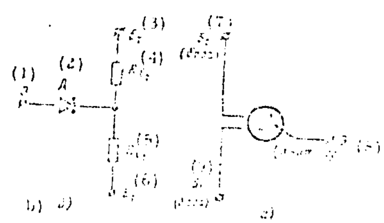

Figure 1. Unijunction transistor; (a) conventional designation; (b) circuit diagram. (1) E (emitter); (2) D; (3) B_2; (4) R_{B2}; (5) R_{B1}; (6) B_1; (7) B_2 (base 2); (8) E (emitter); (9) B_1 (base 1).

UDC 621.382.3

USSR

GREBNEV, A. K., KRIVONOSOV, A. I., RUSLANOV, V. I.

"Unijunction Transistors and Possibilities for Their Use"

Tr. Mosk. aviats. in-ta (Works of the Moscow Aviation Institute), 1970, Issue 215, pp 173-183 (from RZh--Elektronika i yeye primeneniye, No 5, May 1971, Abstract No 5B156)

Translation: Problems are considered connected with the principles of operation, characteristics, parameters, and structures of unijunction transistors, and such basic types of circuits in which these devices are used. Unique material is presented which concerns models of unijunction transistors. 15 ill. 2 tab. 8 ref.

1/1

1/2 023 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--PLASTICITY AND STRENGTH OF MATERIALS UNDER CONDITIONS OF COMPLEX STRESS STRAIN STATE -U-

AUTHOR--GREBNEV, I.V.

COUNTRY OF INFO--USSR

SOURCE--PRIKLADNAYA MEKHANIKA, VOL 6, FEB. 1970, P 120-124

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--PLASTICITY, STRESS STRAIN DIAGRAM, NICKEL, COPPER, METAL TUBE, BIBLIOGRAPHY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/1331 STEP NO--UR/0198/70/006/000/0120/0124

CIRC ACCESSION NO--AP0106108 UNCLASSIFIED

2/2 023 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0106108

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. APPLICATION OF A POLARIZATION OPTICAL TECHNIQUE PROPOSED BY DAVIS (1948) TO THE INVESTIGATION OF THE INFLUENCE OF THE TYPE OF STRESS STRAIN STATE ON THE PLASTICITY AND STRENGTH OF TUBULAR NICKEL AND COPPER SAMPLES. EXPERIMENTS WERE PERFORMED FOR A PLANE STRESSED STATE PRODUCED BY A TENSILE FORCE PLUS INTERNAL PRESSURE AND FOR A THREE DIMENSIONAL STRESSED STATE ACHIEVED BY ADDITIONAL APPLICATION OF EXTERNAL PRESSURE. THE BEHAVIOR OF PLASTIC STRAINS IN THE SAMPLES UNDER PROPORTIONAL LOADING WAS STUDIED TO ULTIMATE FAILURE FOR THESE STRESS STRAIN STATES. ALMOST COMPLETE INVARIANCE OF THE STRAIN CURVES IN THE COORDINATES OF THE TRESCA ST. VENANT THEORY WAS ESTABLISHED. AT THE SAME TIME, A CERTAIN INFLUENCE OF MEAN NORMAL STRESS ON THE VALUE OF THE ULTIMATE STRESSES AND STRAINS WAS OBSERVED.

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1/2 023 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--PLASTICITY AND STRENGTH OF MATERIALS UNDER CONDITIONS OF COMPLEX STRESS STRAIN STATE -U-
AUTHOR--GREBNEV, I.V.

COUNTRY OF INFO--USSR

SOURCE--PRIKLADNAIA MEKHANIKA, VOL 6, FEB. 1970, P 120-124

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--PLASTICITY, STRESS STRAIN DIAGRAM, NICKEL, COPPER, METAL TUBE, BIBLIOGRAPHY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/1331 STEP NO--UR/0198/70/006/000/0120/0124

CIRC ACCESSION NO--AP0106108
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CIRC ACCESSION NO--AP0106108

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. APPLICATION OF A POLARIZATION OPTICAL TECHNIQUE PROPOSED BY DAVIS (1948) TO THE INVESTIGATION OF THE INFLUENCE OF THE TYPE OF STRESS STRAIN STATE ON THE PLASTICITY AND STRENGTH OF TUBULAR NICKEL AND COPPER SAMPLES. EXPERIMENTS WERE PERFORMED FOR A PLANE STRESSED STATE PRODUCED BY A TENSILE FORCE PLUS INTERNAL PRESSURE AND FOR A THREE DIMENSIONAL STRESSED STATE ACHIEVED BY ADDITIONAL APPLICATION OF EXTERNAL PRESSURE. THE BEHAVIOR OF PLASTIC STRAINS IN THE SAMPLES UNDER PROPORTIONAL LOADING WAS STUDIED TO ULTIMATE FAILURE FOR THESE STRESS STRAIN STATES. ALMOST COMPLETE INVARIANCE OF THE STRAIN CURVES IN THE COORDINATES OF THE TRESCA ST. VENANT THEORY WAS ESTABLISHED. AT THE SAME TIME, A CERTAIN INFLUENCE OF MEAN NORMAL STRESS ON THE VALUE OF THE ULTIMATE STRESSES AND STRAINS WAS OBSERVED.

UNCLASSIFIED

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UDC 624.131+539.215

USSR

VASIL'YEV, I. M., GREBNEV, K. K. and VENKATACHALAM, G.

"Calculation of the Three-Dimensional Stability of Uniform Slopes of Earth Dams"

Moscow, vses. konf. Metody opredeleniya napryazh. sostoyaniya i ustoychivosti vysokonaporn. gidrotekhn. sooruzh. i ikh osnovaniy pri statich. i dinamich. nagruzkakh. Tezisy dokl. (All-Union Conference on Methods of Determining the Stress Condition and Stability of High-Pressure Hydraulic Engineering Structures and Their Foundations Under Static and Dynamic Loading. Thesis Report, Collection of Works), 1972, pp 313-322 (from Referativnyy Zhurnal -- Mekhanika, No 4, 1973, Abstract No 4V808 by G. A. Lipson)

Translation: A method of calculating the spatial stability of slopes according to the scheme of a nonolithic body of collapse is proposed, for which the safety factor is determined by the ratio

$$K=tg\phi_D/tg\phi_K=C_D/C_K$$

where ϕ_K, C_K are the critical stability characteristics at the moment of limit equilibrium; ϕ_D, C_D are the actual stability characteristics. The form of the surface slipping of the body of collapse can be described by the equation of the

1/2

USSR

VASIL'YEV, I. M., et al., Vses. konf. Metody opredeleniya napryazh. sostoyaniya i ustoychivosti vysokonaporn. gidrotekhn. sooruzh. i ikh osnovaniy pri statich. i dinamich. nagruzkakh. Tezisy dokl. 1972, pp 313-322

curve $l=d(x/b)^n$ where d is the maximal depth of entrainment of the body of collapse; b is the maximal half width of the body of collapse; n is the index of calculation of the most dangerous form of the surface. A system for conducting calculations is demonstrated, allowing calculation of the additional load from the seismic force, filtration etc., which make the proposed method for ground slopes with uniform ratios C and ϕ more complete and economical.

2/2

1/2 022 UNCLASSIFIED PROCESSING DATE--09OCT70

TITLE--EFFECT OF HEAT TREATMENT ON MECHANICAL AND TECHNOLOGICAL PROPERTIES OF 19KHGS STRIP STEEL -U-

AUTHOR-(03)-RYABUSHKIN, YU.P., GREBNEV, N.P., RUSYY, V.D.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, AVTOMOBIL'NAYA PROMYSHLENNOST', NO 4, APR 70, PP 35-37

DATE PUBLISHED----APR70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--CHROMIUM STEEL, MANGANESE STEEL, SILICON STEEL, LOW ALLOY STEEL, METAL HEAT TREATMENT, MECHANICAL PROPERTY, MACHINABILITY, CARGO TRUCK/(U)19KHGS LOW ALLOY STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/1516 STEP NO--UR/0113/70/000/004/0035/0037

CIRC ACCESSION NO--AP0116932

UNCLASSIFIED

2/2 022 UNCLASSIFIED PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0116932

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE POSSIBILITY OF INCREASING THE STRENGTH PROPERTIES OF SIDE MEMBERS OF A TRUCK FRAME MADE OF 8MM 19KHGS STRIP STEEL BY HEAT TREATMENT IS INVESTIGATED. VARIOUS TESTS WERE CONDUCTED IN ORDER TO DETERMINE THE EFFECT OF TEMPERING TEMPERATURE (200, 400 AND 600DEGREESC) ON MECHANICAL PROPERTIES OF STEEL. THEIR RESULTS PRESENTED IN GRAPHS SHOW, THAT THE STRENGTH PROPERTIES AFTER HARDENING AND TEMPERING, ARE SUBSTANTIALLY BETTER THAN THOSE OF STANDARD 19KHGS STEEL. THE BEST RESULTS WERE OBTAINED WITH TEMPERING TEMPERATURE OF 500-600DEGREESC. TESTS CONDUCTED ON TRANSVERSE AND LONGITUDINAL SAMPLES OF V TYPE, IN ORDER TO DETERMINE THE TEMPERATURE DEPENDENCE OF THE IMPACT STRENGTH SHOW A GOOD STABILITY OF HEAT TREATED STEEL, WITH RESPECT TO TEMPERATURE, IN THE RANGE OF PLUS 20 TO MINUS 80DEGREESC. THE MACHINABILITY OF HEAT TREATED STEEL WAS CHECKED BY DRILLING. THE RESULTS OF THIS INVESTIGATION SHOW THAT A SUBSTANTIAL IMPROVEMENT OF MECHANICAL PROPERTIES OF 19KHGS STEEL, AND IN PARTICULAR OF THE FRAME SIDE MEMBERS MAY BE OBTAINED BY HEAT TREATMENT.

UNCLASSIFIED

USSR

UDC 621.375:621.121

GREBNEV, V. N.

"A Tunnel-Diode Amplifier"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 5, Feb 72, Author's Certificate No 327569, Division H, filed 9 Feb 70, published 26 Jan 72, p 161

Translation: This Author's Certificate introduces an amplifier based on a tunnel diode of the reflecting type. The amplifier contains a coaxial tank circuit. Connected in parallel with the tank are a tunnel diode, a trimmer, and a stabilizing circuit comprised of a resistor and a parallel tank circuit. As a distinguishing feature of the patent, the amplifier is designed to eliminate parasitic emission from developing across the local tank circuit formed by the trimmer capacitance and the inductance of the structural elements located between this trimmer and the diode. The resistor in the stabilizing circuit is connected closer to the diode than is the trimmer, and this resistor is made in the form of a washer through which the central rod of the main tank circuit passes. The diode is located on the end of the central rod in direct proximity to the resistor, and the stabilizing circuit tank is made in the form of several $\frac{1}{4}$-wave loops away from the ring of the resistor washer perpendicular to the axis of the main tank circuit.

1/1

UNCLASSIFIED

TITLE--ON THE NERVOUS SYSTEM ROLE IN THE MECHANISM OF MEDICINAL MUD EFFECT ON THE PROCESSES OF RESORPTION IN THE INTESTINE -U-

AUTHOR--GREBNEVA, L.S., FAYTELBERGBLANK, V.R.

COUNTRY OF INFO--USSR

SOURCE--FIZIOLOGICHNIY ZHURNAL, 1970, VOL 16, NR 1, PP 90-95

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ECG, CENTRAL NERVOUS SYSTEM, SKIN, REFLEX, SMALL INTESTINE, SPINAL CORD, BRAIN, CEREBRAL CORTEX

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1982/0908 STEP NO--UR/0238/70/016/001/0090/0095

CIRC ACCESSION NO--AP0052326

UNCLASSIFIED

Acc. Nr. AP0052326 Ref. Code: UR0248

PRIMARY SOURCE: Fiziologichniy Zhurnal, 1970, Vol 16, Nr 1, pp 90-95

ON THE NERVOUS SYSTEM ROLE IN THE MECHANISM OF MEDICINAL MUD EFFECT ON THE PROCESSES OF RESORPTION IN THE INTESTINE

L. S. Grebneva, V. R. Faytelberg-Blank

Department of Pathologic Physiology, Agricultural Institute, Odessa

Summary

On 72 dogs with an isolated intestinal loop according to Thiry the role of the nervous system in the mechanism of medicinal mud effect on the processes of resorption in the intestine was studied.

The authors found out that medicinal mud changes the processes of resorption in the intestine with the participation of higher divisions of the central nervous system.

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REEL/FRAME
19820908

2

AP0052326

and vegetative nervous system. Besides the authors propose as a guide the scheme of the reflex arc under effect of medicinal mud on the processes of resorption in the intestine: 1 — skin exteroceptors; 2 — intestine interoceptors; 3 — fibres of the vegetative nervous system, 4 — spinal cord pathways, 5 — brain stem reticular formation, 6 — subcortical nervous formations, 7 — cortex, 8 — efferent pathways, 9 — effector — small intestine.

3/2

19820909

USSR

UDC 612.766.1:6

NAVAKATIKYAN, A. O., and GREBNYAK, V. P., Department of Labor Physiology, Kiev Institute of Labor Hygiene and Occupational Diseases, Laboratory of Functional Diagnostics, Donetsk Institute of Labor Hygiene and Occupational Diseases

"Application of the Theory of Stochastic Functions in Mathematical Description of the Dynamics of Cardiac Rhythm during Work"

Leningrad, Fiziologicheskiy Zhurnal SSSR, Vol 56, No 4, 1970, pp 645-650

Abstract: The theory of stochastic processes was used in this study for physiological analysis of cardiac rhythm dynamics throughout the work shift. The possibility and the expediency of determining the correlation of functions and, particularly, indices of the rate of its decrease (IK and m), as well as the average arithmetic value of the cardiac rhythm and its standard deviations, were shown. Data processing is considerably facilitated if the cardiac rhythm changes occur as a stationary stochastic process. A similar method can be used to analyze the dynamics of other physiological functions.

1/1

USSR

UDC 621.3.023.669.295

TROITSKIY, V. N., GREBTSOV, B. M., and AYVAZOV, M. I., Institute of New Problems in Chemistry of the Academy of Sciences USSR

"The Production of Titanium Boronitride Powders in the Plasma of SHF (Super High Frequency) Discharge"

Kiev, Poroshkovaya Metallurgiya, No 11(131), Nov 73, pp 6-9

Abstract: A study was made of the possibility of producing alloys in the Ti-B-N system during a very short duration ($\sim 10^{-2}$ sec) of stay of the reacting mixture in the plasma-chemical reactor. For this purpose a previously described (Ibid.: No 3, 1972) installation was used in which a joint reduction of titanium and boron chlorides was realized in nitrogen plasma generated by continuous SHF discharge of 15 kwt power. The analysis of the temperature dependence of the electroconductivity of boronitrides shows that a dissolution of $\sim$1 6 wt % boron in titanium nitride results in a diminution of the temperature coefficient of the electric resistance of boronitrides by 2.5 times, when compared to pure titanium nitride. Two figures, one table, six bibliographic references.

1/1

1/2 025 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--THERMOPHYSICAL PROPERTIES OF UNPLASTICIZED POLY(VINYL CHLORIDE)
PVKHS-5 -U-

AUTHOR-(03)-CHERNOBYLSKIY, I.I., PIVEN, A.N., GRECHANAYA, N.A.

6

COUNTRY OF INFO--USSR

SOURCE--KHIM. PROM. UKR. 1970, (1) 27-9

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--HEAT CONDUCTIVITY, SPECIFIC HEAT, ENTHALPY, POLYVINYL CHLORIDE, LEAD COMPOUND, TEMPERATURE DEPENDENCE, POLYMER PHYSICAL PROPERTY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/1511 STEP NO--UR/0436/70/000/001/0027/0030

CIRC ACCESSION NO--AP0112505
UNCLASSIFIED

2/2 025 UNCLASSIFIED PROCESSING DATE--020CT70

CIRC ACCESSION NO--AP0112505

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CHANGES OF HEAT COND. COEFF. (LAMBDA), TEMP. TRANSFER COEFF. (A), D., SP. HEAT (C SUBP) AND ENTHALPY WITH TEMP. IN 0-200DEGREES INTERVAL WERE DETD. FOR THE UNPLASTICIZED POLY(VINYL CHLORIDE) (I) CONTG. PBCO SUB3 5, PB STEARATE 3, AND STEARIN 0.5 PARTS IN 100 PARTS I. THE RESULTS ARE PRESENTED IN GRAPHS. THE INCREASE IN THE DETN. PRESSURE FROM 5 TIMES 10 PRIME5 TO 50 TIMES 10 PRIME5 N-M PRIME2 INCREASED LAMBDA BY 6PERCENT, A BY 5-6PERCENT, D. BY 2-3PERCENT, AND C SUBP BY 2-3PERCENT WITHOUT ALTERING THE CHARACTER OF THE PROPERTY TEMP. DEPENDANCE.

UNCLASSIFIED

172 033 UNCLASSIFIED

TITLE--RHEOLOGICAL BEHAVIOR OF POLYDISPERSED CIS,POLYBUTADIENES -U-

AUTHOR-(03)-GRECHANOVSKIY, V.A., DINER, YE.Z., KROL, V.A.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN., SER. A 1970, 12(3), 561-7

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS, CHEMISTRY

TOPIC TAGS--POLYMER RHEOLOGY, POLYBUTADIENE, SYNTHETIC RUBBER, CATALYTIC POLYMERIZATION, SHEAR STRESS, VISCOMETER, FLUID VISCOSITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/1198 STEP NO--UR/0459/70/012/003/0561/0567

CIRC ACCESSION NO--AP0116663

UNCLASSIFIED

2/2 033 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0116663

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RHEOL. PROPERTIES OF CIS,POLYBUTADIENE (SKD RUBBER) (I) (OBTAINED BY POLYMN. IN THE PRESENCE OF TI SALTS) WERE STUDIED AT LOW AND HIGH SHEAR STRESSES (SIGMA) AND SHEAR RATES (GAMMA) BY MEANS OF A MODIFIED MOONEY VISCOMETER AT 20-100DEGREES. RAPID SEDIMENTATION ANAL. IN AN ULTRACENTRIFUGE SPINCO GAVE 3 SETS OF I SAMPLES HAVING DIFFERENT WT. AV. MOL. WT. AND (OR) POLYDISPERSITY INDEX. INCREASED POLYDISPERSITY AT A CONST. VISCOSITY AV. MOL. WT. BROUGHT ABOUT LOWER VISCOSITY. AT A GAMMA SIMILAR TO 1 SEC PRIME NEGATIVE1, THE VISCOSITY OF I WAS DEPENDENT OF POLYDISPERSITY, WHEREAS AT GAMMA IS LARGER THAN OR EQUAL TO 10 SEC PRIME NEGATIVE1, THE VISCOSITY WAS A SINGLE VALUED FUNCTION OF POLYDISPERSITY. THREE EQUATIONS, WHICH RELATED THE VISCOSITY OF I TO THE MOL. WT. UNDER VARIOUS FLOW CONDITIONS, WERE DERIVED. THE EXPONENT IN THE EQUATION WAS INVERSELY PROPORTIONAL TO SIGMA AND (OR) GAMMA. FACILITY: VSES. NAUCH. ISSLED. INST. SIN. KAUCH. IM. LEBEDEVA, LENINGRAD, USSR.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--KINETICS OF HOMOGENEOUS BUTADIENE POLYMERIZATION CATALYZED BY TITANIUM CHLORIDE IODIDE,TRIISOBUTYLALUMINUM -U-

AUTHOR-(04)-BRESLER, L.S., GRECHANOVSKIY, V.A., MUZSAY, A., PODDUBNVI, I.YA.

COUNTRY OF INFO--USSR

SOURCE--MAKROMOL. CHEM. 1970, 133, 111-18

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL REACTION MECHANISM, CHEMICAL REACTION KINETICS, BUTADIENE, MOLECULAR WEIGHT, IODINE, ORGANOALUMINUM COMPOUND, TITANIUM CHLORIDE, POLYMERIZATION CATALYST

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1615 STEP NO--SZ/0000/70/133/000/0111/0118

CIRC ACCESSION NO--AP0112609

UNCLASSIFIED

2/2 020 UNCLASSIFIED PROCESSING DATE--30OCT70
CIRC ACCESSION NO--AP0112609
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. KINETICS OF HOMOGENEOUS BUTADIENE POLYMN. INITIATED BY TII SUB2 CL SUB2 ISO,BU SUB3 AL WAS STUDIED AT CONST. MONOMER CONCN. A REACTION MECHANISM INVOLVING FAST INITIATION AND PROPAGATION OF LIVING CHAINS WITH REVERSIBLE DEACTIVATION OF THE ACTIVE SITES WAS PROPOSED. THE NO. AND WE. AV. MOL. WTS. OF THE POLYMER AT ANY MOMENT AFTER ESTABLISHING THE DEACTIVATION REACTIVATION EQUIL. WERE CALCD. FACILITY: SYN. RUBBER RES. INST., LENINGRAD, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002201010020-3"

1/2 014 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--DETERMINING THE TECHNOLOGICAL PROPERTIES OF SKD-1 RUBBER -U-

AUTHOR-(03)-KROL, V.A., DINER, YE.Z., GRECHANOVSKIY, V.A.

COUNTRY OF INFO--USSR

SOURCE--KAUCH. REZINA 1970, 29(3), 1-3

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--VISCOELASTICITY, SYNTHETIC RUBBER, FLUID VISCOSITY, RUBBER WORKING MACHINERY/(U)SKD1 SYNTHETIC RUBBER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/0463 STEP NO--UR/0138/70/029/003/0001/0003

CIRC ACCESSION NO--AP0119399

UNCLASSIFIED

2/2 014 UNCLASSIFIED PROCESSING DATE--30OCT70
CIRC ACCESSION NO--AP0119399
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STATISTICAL METHODS INDICATE A LINEAR RELATION BETWEEN MOONEY VISCOSITY (M SUB2 SUB0) DETD. AT 200EGREES OF SYNTHETIC SKD-1 RUBBER AND ITS WORKABILITY (W): W EQUALS 225,M SUB2 SUB0 MINUS 2.46. THE RELATION IS RECOMMENDED FOR ROUTINE PROCESS CONTROL USE. M SUB2 SUB0 IS RELATED LINEARLY TO MOONEY VISCOSITY DETD. AT 100DEGREES BY THE STD. SOVIET METHOD. THE VISCOELASTIC PROPERTIES OF SKD-1 (AND W) IMPROVE WITH THE INCREASE OF ITS POLYDISPERSITY. FACILITY: VSES. NAUCH.-ISSLED. INST. SIN. KAUCH. IM. LEBEDEVA, LENINGRAD, USSR.

UNCLASSIFIED

USSR UDC 678.7:539.2

PODDUBNYY, I. Ya., ERENBURG, Ye. G., and GRECHANOVSKIY, V. A., All Union Scientific Research Institute of Synthetic Rubber imeni S. V. Lebedev

"Research on the Molecular Structure of Synthetic Rubbers"

Moscow, Kauchuk i Rezina, No 2, 1971, pp 6-9

Abstract: The article is a survey of the principal work done at the Physico-chemical Laboratory of the All Union Scientific Research Institute of Synthetic Rubber in the field of the molecular structure of various types of synthetic rubbers. The comprehensive study of hydrodynamic properties of solutions established the relationship between the intrinsic viscosity and sedimentation constant of butadiene-styrene, cis-1,4-butadiene, cis-1,4-isoprene, butadiene-nitrile rubbers of various brands, butyl rubber and copolymers of the SKEP type and their molecular weight. Molecular-weight distribution and kinetic data were used to study the anionic polymerization of butadiene and isoprene under the influence of butyllithium, as well as the coordination-ionic polymerization of these same monomers under the influence of complex catalysts. Methods were developed for a quantitative characterization of polymer branching, based on measurements of the intrinsic

USSR

PODDUBNYY, I. Ya., et al, Kauchuk i Rezina, No 2, 1971, pp 6-9

viscosity of homogeneous fractions with known molecular weight in a θ-solvent, as well as combined intrinsic viscosity and sedimentation constant measurements. Experimental studies of the branching of macromolecules of synthetic rubbers obtained in the presence of different catalytic systems established the following:

1. Macromolecules of SKI-3 rubber synthesized under ordinary conditions are linear; disturbing the polymerization regime in the production of this polymer may lead to the formation of highly cross-linked structures.

2. Macromolecules of cis-polybutadiene, obtained with the use of a catalytic system containing cobalt salts (SKD-2), remain linear for all practical purposes regardless of the polymerization temperature on moderate conversion.

3. The degree of branching of butadiene-nitrile (emulsion) rubbers increases with increased acrylonitrile content.

Methods were developed for studying molecular chain flexibility, the homogeneity

1/4 011 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--EFFECTIVE ORGANIZATION OF JOURNALS FOR INFORMATION RETRIEVAL -U-

AUTHOR--GRECHIKHIN, A.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, SOTSIALISTICHESKAYA INDUSTRIYA, 24 JAN 70, P 2

DATE PUBLISHED--24JAN70

SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES

TOPIC TAGS--DATA RETRIEVAL, S AND T PUBLICATION, SCIENTIFIC INFORMATION, S AND T PUBLICATION POLICY, S AND T PUBLICATION PROBLEM, COMPUTER APPLICATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1986/1505 STEP NO--UR/0533/70/000/000/0002/0002

CIRC ACCESSION NO--AN0103325

UNCLASSIFIED

2/4 011 UNCLASSIFIED PROCESSING DATE--11SEP70
CIRC ACCESSION NO--AN0103325
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT IS A COMMONLY HELD OPINION AMONG SCIENTISTS AND ENGINEERS THAT IT IS SOMETIMES EASIER TO MAKE A DISCOVERY OR PERFORM AN INVESTIGATION OVER AGAIN THAN TO ATTEMPT TO FIND DATA ON PREVIOUS RESEARCH USING THE PRESENT SYSTEM OF SCIENTIFIC AND TECHNICAL INFORMATION. IN SPITE OF THIS, ACCORDING TO MODEST CALCULATIONS, MOST SCIENTIFIC AND TECHNICAL IDEAS ARE PRINTED FIVE TO SIX TIMES REGARDLESS OF THEIR NEWNESS AND VALUE. THUS, AT LEAST 80-90 PERCENT OF ALL PUBLICATIONS ARE REPETITIONS OF INFORMATION ALREADY KNOWN. IN THE AGE OF SCIENTIFIC AND TECHNICAL REVOLUTION, WHEN THE FLOW OF NEW INFORMATION INCREASES AS AN AVALANCHE, THE ABSTRACT JOURNALS HAVE BEEN QUITE USEFUL. HOWEVER, EVEN THESE JOURNALS, IN SPITE OF THEIR COMPACT NATURE, CANNOT ENCOMPASS THE ENTIRE RANGE OF NEW TECHNICAL INFORMATION. ALSO, THESE JOURNALS ARE PUBLISHED WITH CONSIDERABLE DELAY. BESIDES, THE ABSTRACTS ARE PUBLISHED WITHOUT ANALYSIS, EVALUATION OR CRITICAL THOUGHT. THEREFORE, THE ABSTRACT JOURNALS ARE NO PANACEA OF ALL ILLS. THE ABSENCE OF INTERDISCIPLINARY INFORMATION PUBLICATIONS IS SHARPLY FELT. THEIR PUBLICATION COULD BE ORGAINZED ON THE BASIS OF THE ALL UNION INSTITUTE OF SCIENTIFIC AND TECHNICAL INFORMATION AND TASS. AT FIRST, THE VERY POPULAR "BULLETIN OF FOREIGN SCIENTIFIC AND TECHNICAL INFORMATION OF TASS" COULD BE USED AS A MODEL. SIMILAR INFORMATION BUT IN THE FORM OF DISCUSSION AND REVIEW ARTICLES OF GENERAL INTEREST COULD BE PUBLISHED AS SCIENTIFIC AND TECHNICAL WEEKLY OR MONTHLY POPULAR JOURNALS. FOREIGN PUBLICATIONS OF THIS TYPE ARE QUITE POPULAR WITH OUR SPECIALISTS.

UNCLASSIFIED

3/4 011 UNCLASSIFIED PROCESSING DATE--11SEP70
CIRC ACCESSION NO--AN0103325
ABSTRACT/EXTRACT--IT WOULD BE USEFUL TO PUBLISH ANALYTICAL REVIEWS OF THE DEVELOPMENT OF AREAS OF SCIENCE, THE MOST IMPORTANT TRENDS, ACHIEVEMENTS OF BRANCH SCIENCE AND TECHNOLOGY, IN THE PAGES OF THE LEADING JOURNALS. INCIDENTLY, REVIEW JOURNALS HAVE LONG BEEN PUBLISHED ABROAD, THEY ARE IN WIDE DEMAND. THE IMPORTANT IF NOT DECISIVE ROLE OF THE REVIEW IN COMBATING THE INFORMATION FLOOD IS CLEARLY UNDERESTIMATED, ALTHOUGH THIS TYPE OF PUBLICATION IS ONE OF THE MOST PROMISING. LIKE SCIENTIFIC AND TECHNICAL JOURNALS THEMSELVES, REVIEWS CAN BE AN ARENA FOR THE COLLISION OF DIFFERING THOUGHTS, THE DISCUSSION OF HYPOTHESES AND DISCOVERIES. THE EDITING TEAM, FOR EXAMPLE, OF THE AMERICAN PERIODICAL REVIEW IN THE AREA OF CHEMISTRY (CHEMICAL REVIEWS) HAS BEGUN PUBLISHING INDIVIDUAL THEMATIC ISSUES CONTAINING SEVERAL REVIEWS ON THE SAME THEME, WRITTEN BY DIFFERNET AUTHORS REPRESENTING DIFFERNET POINTS OF VIEW. IN RECENT TIMES, WE HAVE NOTED EXCESSIVE DIVISION OF SCIENTIFIC THEMES INTO NARROWLY SPECIALIZED JOURNALS. HOWEVER, NARROW SPECIALIZATION RUNS COUNTER TO TODAY'S TENDENCIES OF SCIENTIFIC AND TECHNICAL DEVELOPMENT, IT IS NOT BY CHANCE THAT THE MOST INTERESTING DISCOVERIES ARISE TODAY AT THE BOUNDARIES OF THE DIFFERENT SCIENCES. A SCIENTIST WILL ALWAYS BE BEHIND THE TIMES IF HE REMAINS IN THE NARROW "RUT" OF HIS OWN SPECIALIZATION. BUT WHAT DOES IT MEAN NOT TO SEE, NOT T TT TTJ T TTJ TX T TJT MTMLIZE CREATIVELY THE LATEST INFORMATION IN THIS CENTURY OF BASIX CHANGE? IN MODERN PHYSICS, FOR EXAMPLE, NEW IDEAS RETAIN THEIR PRIMACY FOR NOT OVER FIVE YEARS.

UNCLASSIFIED

4/4 011 UNCLASSIFIED PROCESSING DATE--11SEP70
CIRC ACCESSION NO--AN0103325
ABSTRACT/EXTRACT--ARTICLES CONTAINING FRESH INFORMATION CONCERNING THESE IDEAS ARE SOMETIMES DELAYED IN PUBLICATION BY SEVERAL YEARS. WHAT CAN BE THE EFFECTIVENESS OF SCIENTIFIC ACTIVITY UNDER THESE CONDITIONS? TODAY THE RATE OF PUBLICATION OF SCIENTIFIC ARTICLES SHOULD APPROXIMATE THE RATE OF PUBLICATION OF NEWSPAPER ARTICLES. WITHOUT THIS, SCIENCE WILL FALL BEHIND THE TEMPO OF THE TIMES. IN ORDER FOR OUR DEFENSE OF THE JOURNALS NOT TO SEEM SOMEWHAT ARCHAIC, WE RECALL THAT THE ELECTRONIC COMPUTER, IN WHICH SOME SEE THE UNIVERSAL DEFENSE FROM INFORMATION CATACLYSMS, WILL NOT BE ABLE TO COMPETE WITH TRADITIONAL MEANS OF TRANSMISSION OF SCIENTIFIC AND TECHNICAL INFORMATION FOR SOME TIME. THE MOST CAPACIOUS AND FASTEST ELECTRONIC COMPUTER CANNOT EVALUATE THE NEWNESS, CANNOT CREATIVELY SUMMARIZE OR UNDERSTAND NOT ONLY LITERAL INFORMATION, BUT EVEN MORE IMPORTANTLY THE INFORMATION WRITTEN BETWEEN THE LINES. TRUE, THE MEMORY OF A SINGLE COMPUTER WILL EVENTUALLY BE ABLE TO STORE ALL THE KNOWLEDGE ACCUMULATED SINCE THE DAWN OF HUMAN HISTORY. BUT IF TODAY IN THE FUNDAMENTAL LIBRARIES HALF THE BOOKS AND JOURNALS REMAIN UNTOUCHED ON THE SHELVES, WHAT GUARANTEE HAVE WE THAT THE SAME SORT OF THING WILL NOT OCCUR WITH THE MEMORY CELLS OF THE ELECTRONIC COMPUTER?

UNCLASSIFIED

USSR

UDC: 621.374.32

GORBACHEV, A. A., GRECHIKHIN, A. I., Active Members of the Scientific and Technical Society of Radio Engineering, Electronics and Communications imeni A. S. Popov

"A Pulse Radio Signal Accumulator"

Moscow, Radiotekhnica, Vol. 26, No 6, Jun 71, pp 87-90

Abstract: This article presents a description and circuit analysis of a device for filtering out periodic radio pulses from a mixture of useful signal with additive noise. In addition to accumulating a given number of discrete pulse values, the device takes off the accumulated values in the proper order, interpolates, and transmits the filtered signal to an external circuit. As a distinguishing feature of the device, it is designed for accumulation of a relatively large number of pulses (10^3-10^4) at a prf of 50-100 HZ. The proposed circuit is a multiple-channel analog system with averaging of discrete signal samples on capacitive accumulators. The signal isolation error is evaluated. The accumulator was used for filtering pulses with a duration of 500 us and a spectral width of about 40 kHz spaced from 1 to 100 ms apart against a background of normal noise. With accumulation of 4800 pulses, the ratio of the average signal power to the average power of the error due to both the input noise residue and distortions of the function in the device coupled with instrument noises was $(1\text{-}4)\cdot 10^2$. The level of commutation noises

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002201010020-3"

GORBACHEV, A. A., GRECHIKHIN, A. I., Radiotekhnica, Vol. 26, No 6, Jun 71, pp 87-90

at the output of the accumulator is about 20 mV, while the maximum output signal level is 1 V. The interpolation filter is made up of four resonance circuits. The device can be improved by using low-noise and high-speed multichannel commutators to increase filtration accuracy and extend the range of usable frequencies and the dynamic range of the instrument.

2/2

USSR

UDC: 533.9.083

GRECHIKHIN, L. I. and GRECHIKHINA, R. G.

"Measuring the Basic Parameters of a Plasma by the Spectral Brightness of Transitions"

Moscow, Izmeritel'naya tekhnika, No 4, 1972, pp 27-28

Abstract: This paper considers the determination of the principal parameters of a plasma through the measurement of the absolute and relative spectral brightness of forbidden and resolved transitions. In particular, it examines a plasma in equlibrium, consisting of copper vapor. The reason for this choice is that copper is often used as the structural material for many plasma devices. The authors begin their analysis with the Saha equation for single ionization, and on the basis of their computations, plot a family of Saha curves for copper-vapor plasmas under various pressures. Analysis of the curves shows that the dependence of the thermodynamic state on the pressure, temperature, and concentration of the

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USSR

GRECHIKHIN, L. I., and GRECHIKHINA, R. G., Izmeritel'naya tekhnika, No 4, 1972, pp 27-28

plasma's charged particles is single-valued. Along with the Saha formula, the authors use the equation of state and the expressions for the absolute and relative spectral brightness of the forbidden and resolved transitions. For their method of measuring the thermodynamic state of the plasma, the authors claim an accuracy sufficient for practical purposes.

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1/2 026 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--EFFECT OF HETEROGENEOUS INTERATOMIC ELECTRICAL FIELDS ON AN EMMITTING ATOM IN A LOW TEMPERATURE PLASMA -U-

AUTHOR--GRECHIKHIN, L.I.

COUNTRY OF INFO--USSR

SOURCE--TEPLOFIZ. VYS. TEMP. 1970, 8(1), 22-8

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--LOW TEMPERATURE PLASMA, COULOMB INTERACTION, ION DENSITY, LINE BROADENING, FORBIDDEN TRANSITION, EMISSION SPECTRUM, MULTIPLET SPLITTING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/0140 STEP NO--UR/0294/70/008/001/0022/0028

CIRC ACCESSION NO--AP0103819

UNCLASSIFIED

2/2 026 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0103819

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF HETEROGENEOUS INTERAT. ELEC. FIELDS ON AN EMITTING ATOM UNDER LOW PLASMA CONDITIONS IS EXAMD. IN MANY CASES, THE CHARGED PARTICLE CONCN. IN THE PLASMA CAN BE FOUND FROM THE BROADENING OF SPECTRAL LINES, DETD. BY THE HETEROGENEOUS FIELD. THE POLAR EFFECT (HARRIS, R. E., 1924; PANTER, S. F.; FOSTER, J. S., 1937) CAN BE USED FOR DIAGNOSTIC PURPOSES, AS WELL AS THE FORBIDDEN TRANSITIONS OF THE S-FN SERIES AND THE PHENOMENON OF THE SUPPLEMENTATION OF THE SPECTRAL LINES IN THE ZN 4 PRIME3 D SUB1,2,3-4 PRIME3 P SUB0,1,2 MULTIPLET. FACILITY: INST. FIZ., MINSK, USSR.

UNCLASSIFIED

USSR UDC: 533.9.083

GRECHIKHIN, L. I. and GRECHIKHINA, R. G.

"Measuring the Basic Parameters of a Plasma by the Spectral Brightness of Transitions"

Moscow, Izmeritel'naya tekhnika, No 4, 1972, pp 27-28

Abstract: This paper considers the determination of the principal parameters of a plasma through the measurement of the absolute and relative spectral brightness of forbidden and resolved transitions. In particular, it examines a plasma in equlibrium, consisting of copper vapor. The reason for this choice is that copper is often used as the structural material for many plasma devices. The authors begin their analysis with the Saha equation for single ionization, and on the basis of their computations, plot a family of Saha curves for copper-vapor plasmas under various pressures. Analysis of the curves shows that the dependence of the thermodynamic state on the pressure, temperature, and concentration of the

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GRECHIKHIN, L. I., and GRECHIKHINA, R. G., Izmeritel'naya tekhnika, No 4, 1972, pp 27-28

plasma's charged particles is single-valued. Along with the Saha formula, the authors use the equation of state and the expressions for the absolute and relative spectral brightness of the forbidden and resolved transitions. For their method of measuring the thermodynamic state of the plasma, the authors claim an accuracy sufficient for practical purposes.

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UDC 669.187.2.083.4.621.365.2

POVOLOTSKIY, D. YA., GRECHIN, R. I., RECHKALOVA, A. V., KOFMAN, YY. V., and ROSHCHIN, V. YE.

"Behavior of Oxygen and Reauction Products in Vacuum-Arc Remelting"

Moscow, Stal', No 12, Dec 73, pp 1092-1095

Abstract: Low-carbon (0.03-0.09 % C) and carbon (0.20-0.70% C) steels were used for consumable electrodes in 5-ton arc furnaces for the purpose of studying oxidation and reduction processes in vacuum-arc remelting (VAR) and the behavior of inclusions. It was noted that in VAR, refining of the metal from deoxidation products occurs as a result of mechanical removal of inclusions and reduction of unstable oxides by carbon. Stable inclusions of complex shape (corundum crystals and grains) are more fully removed by mechanical means; however, the same does not hold true for inclusions of spherical shape (globular corundum and glasses) and unstable inclusions. New types of inclusions are formed in the VAR process. Non-equilibrium inclusions, which transfer from the initial metal into the VAR ingot change composition to a more equilibrium composition and change shape to a more idiomorphic form. The length of the refining period when melting the initial metal for VAR has

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POVOLOTSKIY, D. YA., et al., Stal', No 12, Dec 73, pp 1092-1095

little effect on oxygen and inclusion content, so that there are savings in keeping the refining time as short as possible. Six figures, seven bibliographic references.

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USSR

UDC 612.82:612.262

GRECHIN, V. B., and KRAUZ, Ye. I., Department of Applied Neurophysiology, Institute of Experimental Medicine, Academy of Medical Sciences USSR, Leningrad

"Spontaneous Fluctuations in the Partial Pressure of Oxygen in Various Structures of the Human Brain"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol 75, No 3, 1973, pp 20-22

Abstract: The study was performed on five patients with chronic postencephalitis parkinsonism and one epileptic treated by means of electrodes implanted in various cerebral areas. Reproducible spontaneous pO_2 fluctuation curves of nonperiodic, quasiperiodic, and periodic natures were recorded by 92% of the electrodes implanted in cell structures and by 40% of the electrodes implanted in white matter. The fluctuations amounted up to 50% of the average pO_2 level and had a cycle duration of 1-40 sec in the amygdaloid nucleus, 4-8 sec in the cortex, 5-10 sec in the brain stem, 5-20 sec in the thalamic nuclei, 8-10 sec in the amygdala, and 2-5 min in the globus pallidus. The power spectra had a maximum in a range of 6-11 sec in the cell formations and 1-6 sec in the white matter. Consistent diurnal changes were observed. In the evening, the amplitude and periodicity of the oscillations increased, especially in nonspecific

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GRECHIN, V. B., and KRAUZ, Ye. I., Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol 75, No 3, 1973, pp 20-22

thalamic nuclei and in the substantia nigra. Similarly, consistent changes occurred during performance of mental or physical work, after administration of drugs, and during inhalation of oxygen or hyperventilation. No pO_2 fluctuations were recorded 3-6 months after implantation of the electrodes. The reason might have been altered condition of nervous and vascular tissue and changes occurring at the active surface of the electrodes.

USSR UDC 153.3.019.241

[redacted] (Reviewer)

Klinicheskaya Elektrofiziologiya (Clinical Electrophysiology), edited by Gancho Ganeva, Sofiya, 1970

Leningrad, Fiziologicheskiy Zhurnal SSSR imeni I. M. Sechenov, No 8, 1972, p 1,325

Translation: The book under review is the work of a group of Bulgarian investigators. It takes up the main problems of present-day clinical electrophysiology. Its many chapters deal with different aspects of the most up-to-date electrophysiological methods now in use and improved after clinical experience.

In the introduction to the monograph, the editor examines the main historical features of electrophysiology and possible clinical application. A special chapter describes the current status of the teaching on the genesis of bioelectrical phenomena in nerve and muscular tissues and sets forth the present-day views on the mechanism of generation of resting and action potentials in the neuromuscular apparatus. It also reflects the theoretical problems arising from analysis of excitation and inhibition in nerve tissue. Some theoretically important data are given on the principles of recording and measuring electrical processes in living tissue. There are some interesting considerations on the

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GRECHIN, V. B., Fiziologicheskiy Zhurnal SSSR imeni I. M. Sechenov, No 8, 1972, p 1,325

principles to be followed in deriving biopotentials and on the properties of electrodes, amplifiers, and recording systems.

The most significant chapter is the one that discusses the current status of clinical electroencephalography: methods and "underwater rocks" of clinical electrography, classification of EEG's and elements, diagnostic and prognostic value of individual phenomena. The current thinking (including the author's) on the genesis of the EEG and its separate components is set forth. An interesting and legitimate attempt is made to find correlations between electrographic symptoms and the phenomena of excitation and inhibition in the CNS.

A valuable section of the book is devoted to a detailed account of the nosological peculiarities of the EEG in brain tumors, epilepsy, dyskinesias, mental pathology, trauma, and so forth. The diagnostic possibilities of the EEG in resuscitation and anesthesiology are briefly noted.

Substantial chapters are given over to electrodiagnostic methods: GSR, chronaximetry, accommodometry, and diagnostic stimulation. Independent

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GRECHIN, V. B., Fiziologicheskiy Zhurnal SSSR imeni I. M. Sechenov, No 8, 1972, p 1,325

sections of the monograph describe in detail the technical aspects and diagnostic possibilities of rheography and electromyography. Some features of the nosological phenomenology of these processes in disturbances of the peripheral and central nervous systems are discussed. A short section touches on methods and some diagnostic possibilities of electrocardiography and mechanocardiography. A separate chapter presents a fairly detailed account of the main electrophysiological methods used and developed in ophthalmology, electroretinography and electrooculography.

On the whole, the book is undoubtedly of practical value. It reflects the advances made by Bulgarian scientists in the field of clinical electrography.

Minor shortcomings in the main chapters (exaggeration of the nosological significance of the EEG and EMG symptoms, excessive terseness in some of the materials dealing with the EKG, oversimplification in the theoretical interpretation of the REG and GSR), too much similarity in some of the conclusions, and occasional postulation of well-known electrophysiological data and facts -- all these should be corrected when preparing a new edition of this generally very important and essential book.

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USSR UDC: 8.74

GRECHINA, L. A., KOLOTOSHIN, S. P.

"Some K-list Relationships in Systems Algebra"

Prom. Kibernetika [Industrial Cybernetics--Collection of Works], Kiev, 1971, pp 96-100 (Translated from Referativnyy Zhurnal Kibernetika, No 11, 1972, Abstract No 11V529, by V. Mikheyev)

Translation: Certain K-list relationships from systems algebra are studied. System α refers to a certain relationship in a pair of sets X and Y, i.e., the subset of the Cartesian product XxY. A K-list is defined by the relationship $\psi_\alpha(\omega)=\{X, Y:t\}$, where

$$\psi_\alpha(\omega)=\begin{cases}1, \epsilon\omega\_\alpha\\ 0, \epsilon\omega\ \alpha\end{cases}$$

is the indicator of set α. It is shown that: 1) the K-list characterizing the indicator of system $\alpha\beta$ is the union of the K-lists representing the systems α and β; 2) the K-list describing a system α^2 is the sequential union of the

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Grechina, L. A., Kolotoshin, S. P., Prom. Kibernetika, Kiev, 1971, pp 96-100

K-list ψ_α with its self; 3) the intersection of two equivalent systems is an equivalent system.

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1/2 020 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--FUNCTIONAL CHANGES OF THE LIVER IN MUSHROOM POISONING -U-

AUTHOR-(04)-GRECHISHKIN, D.K., MOZHAYEV, G.A., KLODCHENKO, N.N., GONCHAROV, A.I.
COUNTRY OF INFO--USSR

SOURCE--VRACHEBNOYE DELO, 1970, NR 5, PP 60-62

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--FUNGUS, POISON EFFECT, LIVER FUNCTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/0433 STEP NO--UR/0475/70/000/005/0060/0062

CIRC ACCESSION NO--AP0126186
UNCLASSIFIED

2/2 020 UNCLASSIFIED PROCESSING DATE--20NOV70
CIRC ACCESSION NO--AP0126180
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RESULTS ARE ANALYSED OF A STUDY OF THE CARBOHYDRATE, PIGMENTARY AND ENZYMATIC LIVER FUNCTIONS IN PATIENTS POISONED WITH THE AGARICUS BULBOSUS MUSHROOM. IT WAS FOUND THAT AS A RESULT OF THE EFFECT OF AGARICUS BULBOSUS TOXINES ABNORMAL CHANGES DEVELOP IN THE PIGMENTARY AND ENZYMATIC FUNCTIONS OF THE LIVER, THE CARBOHYDRATE FUNCTION REMAINING UNCHANGED. HEPATOPROTECTING THERAPY IS RECOMMENDED. FACILITY: VOROSHILOVGRADSKOGO MEDITSINSKOGO INSTITUTA.

UNCLASSIFIED

1/2 021 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--THE CONTENT OF HISTAMINE AND SEROTONIN IN THE GASTRIC WALL IN RATS WITH INDUCED NEUROGENIC DYSTROPHY -U-

AUTHOR-(02)-GRECHISHKIN, L.L., MUSTAFINA, T.K.

COUNTRY OF INFO--USSR

SOURCE--BYULLETIN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 69, NR 3, PP 31-33

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HISTAMINE, SEROTONIN, GASTROINTESTINAL SYSTEM, RAT, DISSESTIVE SYSTEM DISEASE, DIAGNOSTIC METHODS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1982/0855 STEP NO--UR/0219/70/000/003/0031/0033

CIRC ACCESSION NO--AP0052289

UNCLASSIFIED

2/2 021 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0052289

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPERIMENTAL GASTRIC MUCOSAL ULCER WAS INDUCED IN RATS WITH THE AID OF IMMOBILIZATION AND ELECTRIC STIMULATION. THE CONTENT OF HISTAMINE AND SEROTONINE IN THE GASTRIC WALL WAS DETERMINED BY FLUOROMETRY. THERE WAS FOUND AN AUGMENTED LEVEL OF HISTAMINE AND SEROTONINE THREE HOURS AFTER THE STIMULUS AND THERE WAS NOTED A POSITIVE RELATION BETWEEN THE HISTAMINE CONCENTRATION AND NUMBER OF ULCEROUS LESIONS. THE AUTHORS ARE OF THE OPINION THAT ENDOGENOUS HISTAMINE AND SEROTONINE PLAY A PROMINENT ROLE IN THE DEVELOPMENT OF DESTRUCTIVE AFFECTIONS OF THE MUCOUS MEMBRANE OF THE STOMACH.

UNCLASSIFIED

USSR

UDC: 669.24:538.248

YERMAKOV, A. Ye., IVANOV, O. A., SHUR, Ya. S., GREBNISHCHI, R. M., IVANOVA, G. V., Institute of Physics of Metals, UNTs, Academy of Sciences of the USSR, Ural State University imeni V. I. Lenin

"Magnetic Properties of Single-Crystal Nickel Powders"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 33, No 3, Mar 72, pp 558-563

Abstract: The authors investigate the magnetic properties of nickel single-crystal spherical particles as a function of diameter from 22 to 320 nm. It is shown that as particle size increases, the coercive force and residual induction first increase, then decrease after reaching a maximum. The magnetic structure goes through three stages with an increase in particle size from 22 to 320 nm: superparamagnetic, monodomain and polydomain. The authors thank M. Ya. GEN for procedural guidance in making the particles.

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1/2 024 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--ORIENTATION AND CRYSTALLINITY OF POLY(ETHYLENE TEREPHTHALATE) STUDIED BY AN ACOUSTICAL METHOD -U-

AUTHOR-(05)-PEREPECHKO, I.I., GRECHISHKIN, V.A., KAZARYAN, L.G., VASILENKO, ZH.G., BERESTNEV, V.A.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN. SER. A 1970, 12(2), 438-42

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CRYSTALLINE POLYMER, AMORPHOUS POLYMER, POLYETHYLENE TEREPHTHALATE, X RAY DIFFRACTION ANALYSIS, ULTRASONIC VELOCITY, POLYMER STRUCTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0246 STEP NO--UR/0459/70/012/002/0438/0442

CIRC ACCESSION NO--AP0106902

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2/2 024 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0106902

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ORIENTATION FACTOR (ALPHA) (W. MOSELEY, 1960) OF POLY(ETHYLENE TEREPHTHALATE) I CONTG. BOTH CRYST. AND AMORPHOUS REGIONS WAS DETD. BY X RAY DIFFRACTOMETRY. IT WAS DEMONSTRATED THAT MOSELEY'S FORMULA ALPHA SIMILAR TO 1 MINUS (C PRIME2 SUB02-C PRIME2) (C SUB02 AND C ARE THE ULTRASOUND VELOCITIES IN 100PERCENT ISOTROPIC MATERIAL AND IN THE SAMPLE, RESP.) MUST BE REPLACED BY ALPHA EQUALS (1 MINUS(C PRIME2 SUB02-C PRIME2)-(1 MINUS (C PRIME2 SUB02-C PRIME2 SUB01), WHERE C SUB01 IS THE ULTRASOUND VELOCITY IN 100PERCENT CRYST. MATERIAL. C SUB01 OF I WAS ESTD. FROM THE DIFFRACTOMETRY DATA AND C SUB02 WAS DETD. EXPTL. USING A FULLY AMORPHOUS I SAMPLE.

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